

BOOK REVIEW.

INTERNATIONAL RULES OF BOTANICAL NOMENCLATURE, compiled from various sources by W. H. Camp, H. W. Rickett, and C. A. Weatherby, Waltham, Mass.: The Chronica Botanica Co. Johannesburg: Central News Agency. 1948. \$3.50. pp. 120.

That the names used for objects be uniform and always applicable to the same things is as important for a descriptive science as is a stable orthography to a language. Without this there is no real means of communication and no progress. Nomenclature is often regarded by collectors and amateurs as a necessary evil and any change in a name familiar to the individual is apt to be resented. But for any scientific progress a stable series of names each applying to a definite plant is essential. Without it there must be uncertainty and there is sure to be disagreement.

The attempt to achieve such stable names has been the aim of successive International Botanical Congresses for a long time. The basis of the present rules were laid at the Vienna Congress in 1905. Elaborations and modifications have been agreed upon since. The present volume is a statement of the outcome of these deliberations and gives the results as agreed upon in 1930 and the modifications suggested in 1935 which are due for ratification at the forthcoming Conference in 1950. As its editors are careful to point out this is not an "official" document. The latest official statement of the Rules, published in 1931, is now out-of-print. It has, however, been drawn up from official sources and in view of the forthcoming conference its appearance is both welcome and timely. The modifications to the Rules made in 1935 are for convenience of reference printed in heavier type. In this volume of 120 pages, the rules themselves with their accompanying explanatory notes occupy 30 pages, the remainder is taken up with appendices very much the largest of which is a list of names of genera which are conserved, *nomina generica conservanda*, and used although their adoption is not in strict conformity with the rules themselves. Along with this is a most useful index of the genera conserved and those rejected.

These *nomina conservanda* have for long been a source of some criticism and disagreement. Purists readily make out that their use is illogical and that their retention is a weakness in the rules by stultifying the principle of priority as laid down. Against these objections the principle is laid down (Art. 4) that names liable to cause confusion are to be avoided and the creation of unnecessary names to be discouraged. The list on

nomina conservanda is made up of generic names which have been in general use for a long time, at least 50 years, and whose use is unambiguous. The replacement of these by the revival of forgotten and unused synonyms or in some cases by newly created names, would without doubt lead to a good deal of confusion.

Provided that the list is not extended too far and that cases based merely upon personal preferences are not admitted, the general convenience of retention of these names far outweighs any merely logical considerations.

The Rules themselves are divided into Principles, Rules, and Recommendations. The last are not absolutely binding. They are set out in four chapters dealing respectively with (1) General Principles, (2) Categories of Taxonomic Groups and their Names, (3), which is much the largest, Names of Taxonomic Groups, and (4) Interpretation and Modification of the Rules.

The bases of the rules are very simple, one name for one plant, the oldest valid name, usually starting from 1753, to be used, and the various categories, species, genus, family etc., to be based upon types. The type of a species is a definite specimen or in a few cases a pictorial representation, of a genus a species, of a family a genus, and so on.

This type system was agreed to internationally for the first time in 1930. Its adoption has brought about a number of changes in interpretation and definition. For present day descriptions it undoubtedly renders things much clearer and more definite. There are, however, difficulties in its retrospective application. In the case of many of the earlier described species there are no extant authentic specimens and it is necessary to select a type arbitrarily.

The type system has been much criticised on general scientific grounds. All the categories are really abstractions in the sense that they cover numbers of individuals which are not exactly alike. Older botanists undoubtedly drew up their descriptions to cover a range of such variations. To select one from such an assemblage as representing the species (or other category) is regarded as arbitrary. Against such arguments must be put the fact that the selection of a type renders a group, especially a species, quite definite and unambiguous, a most important advantage. Where a group is altered in connotation either by subdivision or by union with others, the name remains attached to that portion which contains the type. For example, the naming of parts of a genus which is subdivided, previous to the adoption of the type system was open to considerable disagreement but now the procedure to be adopted is quite definite. Further, the system ensures that no two names can be valid which are based on the same type: one must be a synonym.

Though essentially simple in plan, the application of the rules is in many cases difficult and can only be done after both historical and taxonomic study. Indeed finality can only be reached after consultation with the older collections and libraries most of which are in Europe. For S. Africa this is a difficulty that cannot be surmounted but one that has to be met. The names in common use here are largely those adopted in the *Flora Capensis*, a work which was published before the adoption of the present rules. Many of these are not in conformity with them. There have been in recent years a number of articles in this Journal on some of the many cases that must be dealt with before an internationally stable series of names can be established.

It is not possible in the space available to discuss the rules in detail but there are one or two minor points that may be mentioned. One which is almost certain to be brought up in 1950 is the orthography of specific epithets. In the Rules there is a recommendation (Rec. XLIII) that specific epithets be written with a small initial letter except where they are taken from the name of a person or are generic or vernacular names.

There is a movement, much favoured in America and recently supported by Kew, that all specific epithets have small initial letters. This would certainly be simple. We have all got used to small letters for geographic epithets and could probably soon become accustomed to such things as *Erica petiveri*, *Gladiolus bolusii*, etc. On the other hand the dropping of the initial capital for epithets which are generic names or are vernacular names may often obscure historical data and may result in apparent bad grammar. For example *Schinus molle* or *Lythrum hyssopifolia* written so are hardly a credit to botanical scholarship.

The section of the Rules dealing with the names for hybrids (Chap. III, § 6) is perhaps the least satisfactory, and scarcely comes into line with recent developments in genetics. It is one that needs consideration at the next conference.

This volume is one of convenient size, well bound and well printed. There are a few misprints but these are obvious slips and not such as to cause any confusion. It is a book that should be in the hands of all taxonomists. Certainly its careful perusal before the Congress to be held in 1950 would very much ease the labours of the section dealing with nomenclature. The thanks of botanists generally must be extended to the American Society of Plant Taxonomists and especially to the three editors for making this work available to the world.